Amendments to the Claims

The listing of claims will replace all prior versions and listings of claims in the application.

1. (Currently Amended) A method of treating HIV-1 infection in a patient, comprising orally administering to a patient in need thereof a compound that ~~selectively~~ inhibits HIV-1 maturation, wherein upon contacting said compound with an HIV-1 infected cell and lysing said HIV-1 infected cell to form a lysate, said lysate exhibits a p25 (CA-SP1) band in a Western blot assay and ~~processing of the viral Gag p25 protein (CA-SP1) to p24 (CA)~~ wherein the HIV-1 is resistant to ~~does not respond to other~~ HIV therapies having a mechanism other than maturation inhibition.

2. (Previously Presented) The method of claim 1 wherein said HIV-1 infection is characterized by HIV-1 infected cells which are capable of releasing HIV-1 virions and wherein said compound does not significantly reduce the quantity of virions released from treated infected cells or has no significant effect on the amount of RNA incorporation into the released virions.

3. (Previously Presented) The method of claim 1, wherein said HIV-1 infection is characterized by HIV-1 infected cells which are capable of releasing HIV-1 virions and wherein said compound inhibits maturation of virions released from the infected cells.

4. (Currently Amended) The method of claim 1, wherein said HIV-1 infection is characterized by HIV-1 infected cells which are capable of releasing HIV-1 virions, wherein each virion comprises a viral membrane, and wherein said compound

causes a preponderance of virions released from the infected cells to exhibit spherical, electron-dense cores that are acentric with respect to the viral particle, to possess crescent-shaped electron-dense layers lying just inside the viral membrane, and to have reduced or no infectivity.

5. (Currently Amended) The method of claim 1, ~~wherein the viral p25 protein comprises a CA-SP1 cleavage site, and~~ wherein said compound inhibits the interaction of HIV protease with the CA-SP1 cleavage site.

6. (Previously Presented) The method of claim 1, wherein said compound interacts with the viral Gag protein.

7. (Previously Presented) The method of claim 6, wherein said compound binds near to or at the site of cleavage of the viral Gag p25 protein (CA-SP1) to p24 (CA).

8. (Canceled)

9. (Original) The method of claim 1, wherein said patient is administered said compound in combination with at least one anti-viral agent.

10. (Previously Presented) The method of claim 9, wherein said at least one anti-viral agent is selected from the group consisting of zidovudine, lamivudine, didanosine, zalcitabine, stavudine, abacavir, nevirapine, delavirdine, efavirenz, saquinavir, ritonavir, indinavir, nelfinavir, amprenavir, adefovir, atazanavir, fosamprenavir, hydroxyurea, AL-721, ampligen, butylated hydroxytoluene; polymannoacetate, castanospermine; contracan; creme pharmatex, CS-87, penciclovir,

famciclovir, acyclovir, cytofovir, ganciclovir, dextran sulfate, D-penicillamine trisodium phosphonoformate, fusidic acid, HPA-23, eflornithine, nonoxynol, pentamidine isethionate, peptide T, phenytoin, isoniazid, ribavirin, rifabutin, ansamycin, trimetrexate, SK-818, suramin, UA001, enfuvirtide, gp41-derived peptides, antibodies to CD4, soluble CD4, CD4-containing molecules, CD4-IgG2, and combinations thereof.

11. (Canceled)

12. (Previously Presented) The method of claim 1, wherein said compound is dimethylsuccinyl betulinic acid, dimethylsuccinyl betulin, or a derivative of dimethylsuccinyl betulinic acid or dimethylsuccinyl betulin.

13. (Previously Presented) The method of claim 1, wherein said compound is selected from the group consisting of 3-O-(3',3'-dimethylsuccinyl) betulinic acid, 3-O-(3',3'-dimethylsuccinyl) betulin, 3-O-(3',3'-dimethylglutaryl) betulin, 3-O-(3',3'-dimethylsuccinyl) dihydrobetulinic acid, 3-O-(3',3'-dimethylglutaryl) betulinic acid, (3',3'-dimethylglutaryl) dihydrobetulinic acid, 3-O-diglycolyl-betulinic acid, 3-O-diglycolyl-dihydrobetulinic acid, and combinations thereof.

Claims 14-81 (Canceled)

82. (Previously Presented) The method of claim 1, wherein said compound inhibits interaction of HIV protease with the viral Gag p25 protein.

83. (Currently Amended) The method of claim 1, wherein said HIV-1 infection is characterized by HIV-1 infected cells which are capable of releasing HIV-1 virions, and wherein each virion comprises a viral membrane, and wherein said compound causes a preponderance of virions released from the infected cells to exhibit spherical, electron-dense cores that are acentric with respect to the virion.

84. (Currently Amended) The method of claim 1, wherein said HIV-1 infection is characterized by HIV-1 infected cells which are capable of releasing HIV-1 virions, and wherein each virion comprises a viral membrane, and wherein said compound causes a preponderance of virions released from the infected cells to possess crescent-shaped electron-dense layers lying just inside the viral membrane.